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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,840	12/13/2001	Ronald L. Stewart	SP00-361	7492
22928	7590	05/06/2004	EXAMINER	
CORNING INCORPORATED			BLACKWELL RUDASIL, GWENDOLYN A	
SP-TI-3-1			ART UNIT	PAPER NUMBER
CORNING, NY 14831			1775	

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	10/016,840	STEWART, RONALD L.	
	Examiner	Art Unit	
	Gwendolyn A. Blackwell-Rudasill	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7, 9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on March 12, 2004 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-7, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent no. 5,844,721, Karpen '721, in view of United States Patent no. 5,548,491, Karpen '491, in view of United Kingdom Published Patent Application no. 0441128, EP '128, further in view of Applicant's disclosure.

Karpen '721 discloses a rearview window with a glass mirror that is doped with Nd₂O₃, which acts as a filter for yellow light. The glass mirror has silver backing with a transparent glass pane in front of the silvered reflective surface. The Nd₂O₃ is contained in the glass in a

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sufficient amount to reduce the amount of vision discomfort from yellow light with the concentration of Nd_2O_3 ranging from 5-30 wt%, more preferably 5-20 wt%. The glass absorbs 95-98% of the yellow light in the wavelength ranging from 565-595 nm, (columns 10-11, lines 52-6). Karpen '721 also discloses that the transmittance of light through the glass is related to the thickness of the glass by an absorption coefficient:

$$\ln(T) = -AL$$

wherein L is the thickness of the glass, A is the absorption coefficient, T is the percentage of light transmitted, and Ln is the natural logarithm. Furthermore, the glass used as the glass pane can be made of a soda lime glass, (column 9, lines 11-23). An example of a glass used as a rearview mirror glass pane is glass made of a mixed alkali zinc silicate glass, (column 9, lines 59-61). Karpen '721 does not specifically disclose the composition of the glass.

Karpen '491 disclose a glass, including any glass used with reflective surfaces, with a Nd_2O_3 content of greater than 5 wt% to reduce the amount of yellow light emitted by the headlight, (column 1, lines 50-57). It is preferred that the amount of Nd_2O_3 in the glass is in the range of 5-15 wt%, (column 11, lines 8-11).

GB '128 disclose a glass with Nd_2O_3 present in an amount greater than 5%. The glass can have the following components in wt%, (page 2):

SiO_2	40-60
Nd_2O_3	10-30
B_2O_3	5-15
Na_2O	3-18
ZnO	0.1-10
K_2O	0-3
Al_2O_3	0-7

The glass of EP '128 can be used for filters, (page 5, lines 33-37). The softening point temperature as claimed by applicant for the Nd_2O_3 containing glass is present in the EP '128

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glass as the glass composition of EP '128 substantially overlaps that as claimed by applicant, (page 9, line 50). Because EP '128 disclose the softening point, the liquidus viscosity would also be present as a latent property.

According to applicant's disclosure, it is known in the art that a thin sheet of glass, called a microsheet, can have a thickness of less than 0.5 mm. In addition, the microsheet can be used for different purposes, such as a laptop LCD. It is also known that mirrors are commonly made by placing a reflective film or coating over a surface of a glass sheet, (page 1, sections [0003-0004]).

Karpen '721 discloses a rearview mirror with a specific example that utilizes an alkali zinc silicate glass however a specific glass composition is not mentioned. The glass disclosed by EP '128, has the composition of an alkali zinc silicate glass that can be used as a filter. As such, it is within the skill of one in the art to modify the rearview mirror of Karpen '721 with the basic alkali zinc silicate glass composition of EP '128 to obtain a rearview mirror having a Nd_2O_3 containing glass with more than 5 wt%, more preferably greater than 5 wt% - 20 wt% of Nd_2O_3 present in the glass thereby obtaining a rearview mirror that blocks more yellow light making for better night vision for the driver, (Karpen '721, columns 11-12, lines 24-9).

While Karpen '721 discloses that the glass is 0.5 mm thick or more, (claim 1), it is known in the art that Nd_2O_3 containing glass sheets can have a thickness less than 0.5mm that are used in diverse applications, such as a laptop LCD. It is within the skill of one in the art to modify the thickness of the glass through routine experimentation to obtain a thickness that provides the optimum amount of light transmittance at the desired wavelength, especially in view of the fact that the Lambert-Beers Law provides for a correlation between the thickness of the glass and the percentage of light transmitted, (Karpen '721, column 9, lines 15-23). Karpen '491 is used to

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show that decreasing the amount of Nd_2O_3 in the glass to 5-15 wt% would still provide the same benefits of improving night vision, (Karpen '491, column 11, lines 30-37).

Response to Arguments

4. Applicant's arguments filed March 12, 2004 have been fully considered but they are not persuasive.

5. In response to Applicant's argument that the glass composition as disclosed by EP '128 is very different from the glass composition as exemplified by Applicant, the examiner recognizes that although the compositions are not exactly the same, the ranges of the prior art and the present invention have considerable overlap. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed.Cir. 1990). A side-by-side comparison of Applicant's composition and EP '128 more clearly demonstrates the overlap of the glass composition.

	Applicant	EP '128
SiO_2	55-70	40-60
Nd_2O_3	at least 5	10-30
B_2O_3	3-14	5-15
Na_2O	5-11	3-18
ZnO	3-10	0.1-10
K_2O	2-9	0-3
Al_2O_3	0.5-4.5	0-7
$\text{Na}_2\text{O} + \text{K}_2\text{O}$	7-20	3-21

Absent an evidentiary showing as to the criticality of the claimed ranges of the glass components in the composition in obtaining unexpected results, it is within the skill of one in the art to optimize the amount of each component to use in the glass by routine experimentation.

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Further more, Karpen '721 discloses a concentration of greater than 5 wt% - 20 wt% of Nd_2O_3 , (column 11, lines 3-6). Karpen '721 also discloses that a mixed alkali zinc silicate glass can be used for a rearview mirror, (column 9, lines 59-61). Based upon the discloses of Karpen '721 and EP '128 it would have been within the one of skill in the art to use the basic zinc silicate glass of EP '128 with the greater than 5 wt% - 20 wt% of Nd_2O_3 content of Karpen '721 to create a glass composition that absorbs 95-98% of the light in the wavelength ranging from 565-595 nm, (Karpen '721, columns 10-11, lines 52-6) that is used to create a rearview mirror that blocks more yellow light making for better night vision for the driver, (Karpen '721, columns 11-12, lines 24-9).

6. In response to Applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Karpen discloses a rearview window with a glass mirror that is doped with Nd_2O_3 , which acts as a filter for yellow light. The glass mirror has silver backing with a transparent glass pane in front of the silvered reflective surface. The Nd_2O_3 is contained in the glass in a sufficient amount to reduce the amount of vision discomfort from yellow light with the concentration of Nd_2O_3 ranging from 5-30 wt%, more preferably 5-20 wt%.

EP '128 disclose a glass with Nd_2O_3 present in an amount greater than 5%, in particular the range is 10-30%. The glass of EP '128 can be used for filters, (page 5, lines 33-37). A rearview mirror is a type of light filter. While Karpen '721 does not specifically disclose that

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the glass composition has to be the glass composition as disclosed in EP '128, EP '128 has met the limitations that Karpen '721 has disclosed as being required for the rearview mirror. In particular, that the glass have a concentration of Nd_2O_3 ranging from 5-30 wt%, more preferably 5-20 wt% in a glass of mixed alkali zinc silicate, (Karpen '721, column 9, lines 59-61). Because EP '128 meets the physical limitations of Karpen '721, it would be within the skill of one in the art to use the basic zinc silicate glass composition of EP '128 as the glass in the review mirror of Karpen '721 using the Nd_2O_3 concentration amount as exemplified by Karpen '721.

7. In response to Applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the method of making the glass) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant has claimed a reflecting mirror with a certain glass composition. The combination of Karpen '721 and EP '128 satisfies those limitations. As such, Applicant's contention that the teachings of Karpen '721 and EP '128 would not produce the glass as exemplified by Applicant does not provide patentable distinction over the prior art.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


United States Patent no. 4,315,186 disclose the use of Nd_2O_3 in an amount ranging from 0.5-5 w% in a glass used as a reflective lamp to decrease the amount of yellow light transmission.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn A. Blackwell-Rudasill whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday; 6:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gwendolyn A. Blackwell-Rudasill
Examiner
Art Unit 1775

gbr


DEBORAH JONES
SUPERVISORY PATENT EXAMINER